

Old MacDonald's Last Wishes...

Old MacDonald had 17 cows. He died. His will said...

The first daughter Malia gets $\frac{1}{2}$ of the cows.

The second daughter Lainey gets $\frac{1}{3}$ of the cows.

The third daughter Janna gets $\frac{1}{9}$ of the cows.

The daughters could not figure out how to divide the cows.

Mr. Hallihan wanted to help so he loaned a cow to them.

Then the first daughter took $\frac{1}{2}$ of 18 cows = 9 cows.

The second daughter took $\frac{1}{3}$ of 18 or 6 cows.

The third daughter took $\frac{1}{9}$ of 18 or 2 cows.

That makes $9 + 6 + 2 = 17$ cows. So Mr. Hallihan took his cow back home.



Explain???

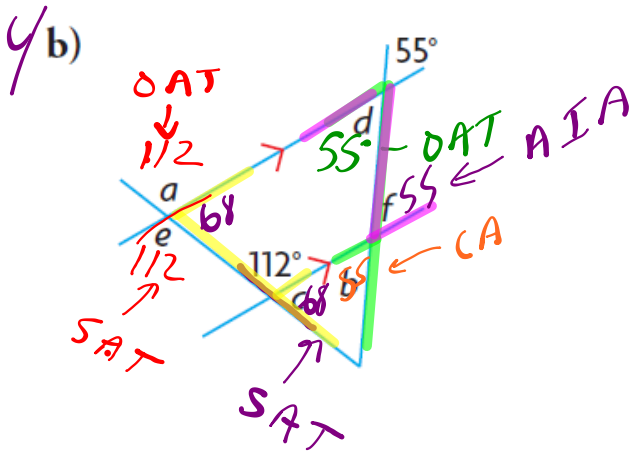
$$\frac{2 \cdot 1}{2 \cdot 9} + \frac{6 \cdot 1}{6 \cdot 3} + \frac{9 \cdot 1}{9 \cdot 2}$$

$$\frac{17}{18}$$

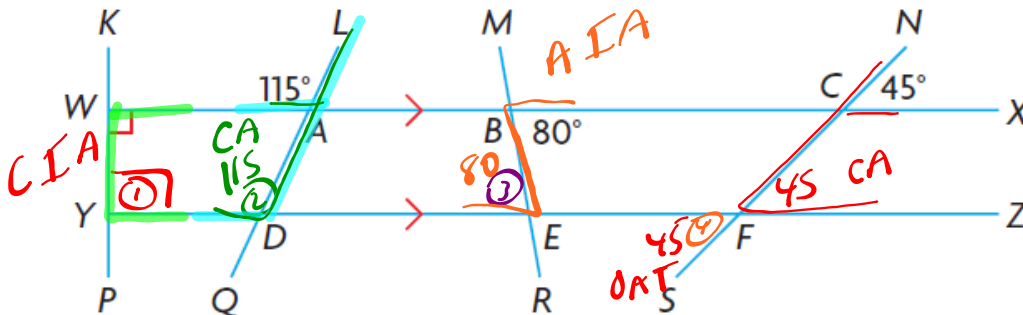
Homework...

p. 72: #2

p. 78: #1, 4, 15

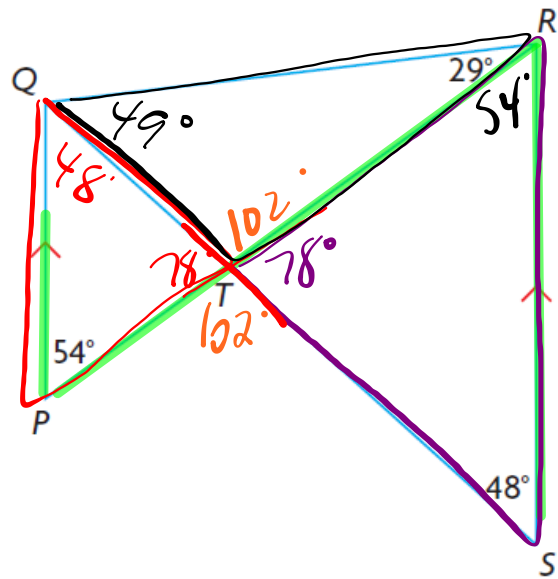


1. Determine the measures of $\angle WYD$, $\angle YDA$, $\angle DEB$, and $\angle EFS$.
Give your reasoning for each measure.



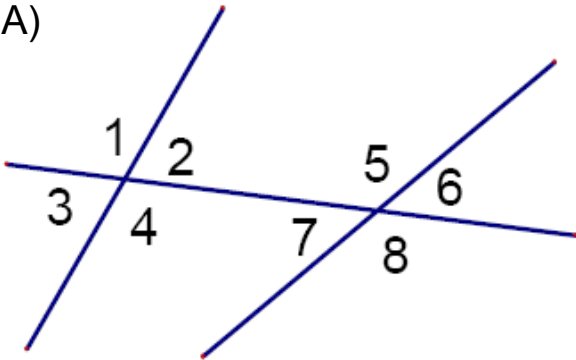
15. Determine the measures of all the unknown angles in this diagram, given $PQ \parallel RS$.

↑
Parallel
//



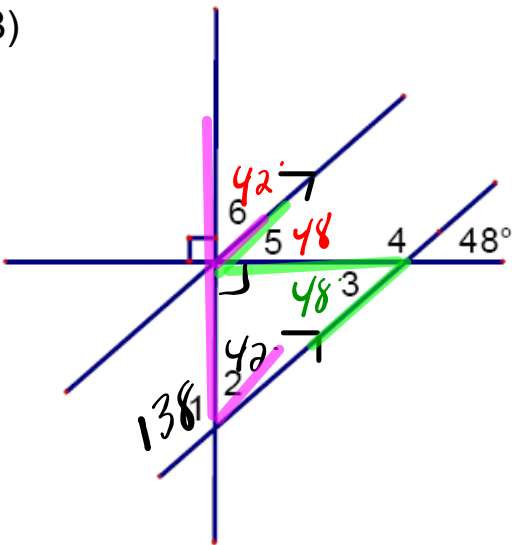
EXERCISE: Practice...

A)



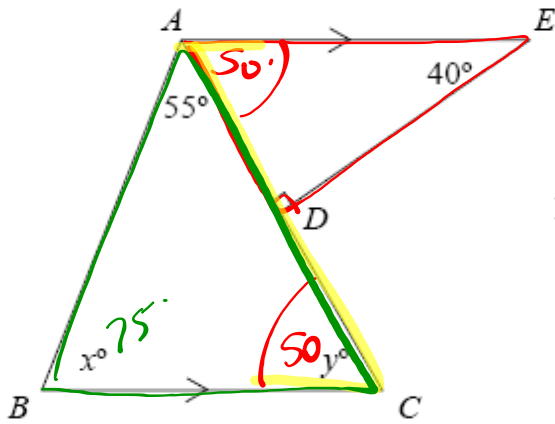
1. $\angle 3$ and $\angle 7$ are corresponding angles.
2. $\angle 4$ and $\angle 5$ are alternate interior angles.
3. $\angle 5$ and $\angle 2$ are same-side interior angles. *CIA*

B)



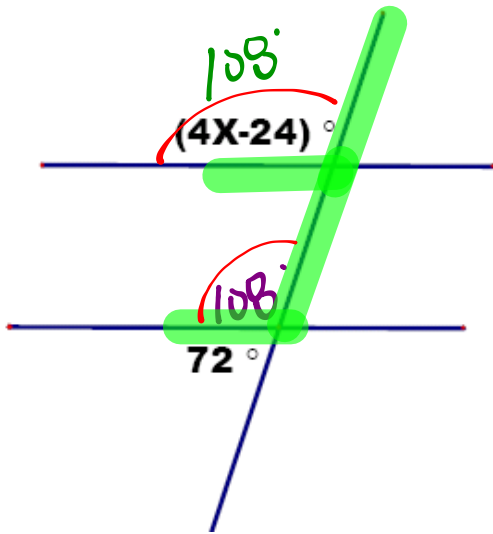
1. $m\angle 1 = 138^\circ$ *SAT*
2. $m\angle 2 = 42^\circ$ *CA*
3. $m\angle 3 = 48^\circ$ *OAT*
4. $m\angle 4 = 132^\circ$ *SAT*
5. $m\angle 5 = 48^\circ$ *AIA*
6. $m\angle 6 = 42^\circ$ *CAT & SAT*

C)



Find x° and y° .

D)



$$\begin{aligned}
 4x - 24 &= 108 \\
 4x &= 108 + 24 \\
 \frac{4x}{4} &= \frac{132}{4} \\
 x &= \underline{\quad\quad\quad} \\
 x &= 33
 \end{aligned}$$

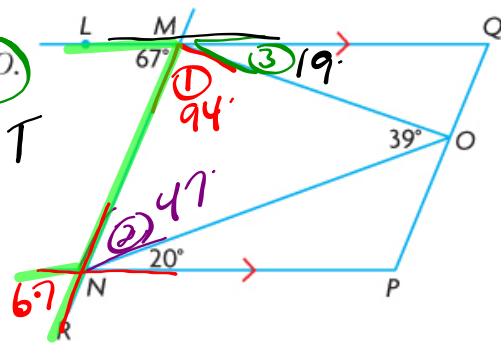
EXAMPLE 3 *p. 95* Using reasoning to solve problems

JUSTIFY!!!

Determine the measures of $\angle NMO$, $\angle MNO$, and $\angle QMO$.

SAT C.A
↓
OAT

SAT



Tyler's Solution

MN is a transversal of parallel lines LQ and NP .

MN intersects parallel lines LQ and NP .

$$\begin{aligned} \angle MNO + 20^\circ &= 67^\circ \\ \angle MNO &= 47^\circ \end{aligned}$$

Since $\angle LMN$ and $\angle MNP$ are alternate interior angles between parallel lines, they are equal.

$$\begin{aligned} \angle NMO + \angle MNO + 39^\circ &= 180^\circ \\ \angle NMO + (47^\circ) + 39^\circ &= 180^\circ \\ \angle NMO + 86^\circ &= 180^\circ \\ \angle NMO &= 94^\circ \end{aligned}$$

The measures of the angles in a triangle add to 180° .

$$\begin{aligned} \angle NMO + \angle QMO + 67^\circ &= 180^\circ \\ (94^\circ) + \angle QMO + 67^\circ &= 180^\circ \\ 161^\circ + \angle QMO &= 180^\circ \\ \angle QMO &= 19^\circ \end{aligned}$$


$\angle LMN$, $\angle NMO$, and $\angle QMO$ form a straight line, so their measures must add to 180° .

The measures of the angles are:

$$\angle MNO = 47^\circ; \angle NMO = 94^\circ; \angle QMO = 19^\circ.$$

HOMework...

1) Assignment - Angle Properties (DUE MONDAY)

2)  Quiz

Attachments

Assignment - Angle Properties.pdf